



Proposed conservation of the name *Penthe* Newman, 1838 (Coleoptera: Tetratomidae: Penthinae) threatened by the discovery of an older available name

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Penthe Newman, 1838 includes nine species distributed in China, the Himalayas, Japan, the Oriental Region and North America (Nikitsky, 1998; Young & Pollock, 2002) and is the type genus of the tetratomid subfamily Penthinae Lacordaire, 1859. Like many other obscure members of Tenebrionoidea, *Penthe* has had an unsettled family placement until recently. Most early authors placed the genus in Tenebrionidae (e.g. Newman, 1838; Melsheimer, 1853). Then, there was a period during which it was most often placed in Melandryidae, either in Melandryini (e.g. LeConte & Horn, 1883), Penthini (Woodruff, 1920), or Tetratomini (e.g. Csiki, 1924). Finally, based on both larval and adult characters, *Penthe* was placed in Tetratomidae (e.g. Crowson, 1955; Lawrence, 1982; Nikitsky, 1998). Adults and larvae feed on various fungi associated with rotting wood, e.g. *Polyporus*, *Piptoporus*, and *Fomitopsis* (Lawrence, 1991). As mentioned below, the name *Penthe* has been used uniformly in the various catalogues, checklists and treatments of North American Coleoptera since Newman's original description in 1838.

While reviewing tenebrionid genus-group names in the second and third editions of the *Catalogue des coléoptères de la collection de M. le comte Dejean* (Dejean, 1834, 1836b) for the fifth volume of the *Catalogue of Palearctic Coleoptera* (Löbl et al., 2008), the senior author discovered a genus-group name that should be used as valid instead of the currently accepted name *Penthe* based on the Principle of Priority (ICZN, 1999: Article 23.1).

Although new generic names in Dejean's catalogues were once considered to be *nomina nuda* because they did not include a description (e.g. Neave, 1939-1940), this is clearly not the case in all situations. In fact, a new genus-group name published before 1931 without a description, but in combination with one or more available species name(s), is available (ICZN, 1999: Article 12.2.5). Several authors (e.g. Spilman, 1973; Silfverberg, 1983, 1984a, b; Alonso-Zarazaga & Lyal, 1999; Bílý & Bellamy, 2002; Bousquet, 2004; Bellamy, 2006) have dealt specifically with the availability of genus-group names proposed for the first time in the catalogues of Dejean (1821, 1833–1836a, 1836b–1837) but this has not been done consistently throughout Coleoptera.

Historical usage of *Anorops* Dejean

Dejean (1834: 210) listed three species-group names in his new genus *Anorops*: *Helops obliquatus* Fabricius, 1798 from “Amer. bor.”, *A. unicolor* Dejean, 1834 (*nomen nudum*) from the same locality and *A. brevicollis* Dejean, 1834 (*nomen nudum*) from Java. Of these species, *obliquatus* Fabricius was the only available species-group name, making the genus name *Anorops* available with *H. obliquatus* as the type species by monotypy. Two years later, Dejean (1836: 231) listed the same three species under his genus *Anorops*. Later, Duponchel (1841: 568) formally described *Anorops* for the first time and reported *Helops obliquatus* Fabricius as the type species of the genus. Chevrolat (1847a: 662) listed the genus *Pyrrocis* Laporte, 1840 as a synonym of *Penthe* and *Anorops* and, in the same publication, Chevrolat (1847b: 574-575) listed *Penthe* as a synonym of *Anorops* and *Pyrrocis*. Chevrolat (1847a, b) did not indicate which generic name he considered to be valid. Schaum (1859: 85) mentioned that both Newman and Dejean based their genera on *Helops obliquatus* Fabricius without indicating either one as the valid name. Melsheimer (1853: 141), Lacordaire (1859: 456), and Gemminger & Harold (1870: 2073) used *Penthe* as the valid name for this genus and listed *Anorops* as a synonym. LeConte & Horn (1883), Woodruff (1920), Csiki (1924), and subsequent authors have all used *Penthe* Newman as the valid name for the genus without any mention of *Anorops* Dejean.

Reversal of precedence

Because *Anorops* Dejean, 1834 and *Penthe* Newman, 1838 have the same type species, *Penthe* is a junior objective synonym of *Anorops* and should be replaced by the older name. However, following the requirements of Article 23.9 (ICZN, 1999) we include a list below of 25 publications, published by more than 10 authors in the immediately preceding 50 years and encompassing a span of more than 10 years to support the conservation of *Penthe* Newman, 1838 over *Anorops* Dejean, 1834. The senior synonym has not been used as a valid taxonomic name since 1899 as far as we know. Supporting references: Abdullah (1973, 1974), Arnett (1962, 2000), Beutel & Friedrich (2005), Chantal (1985), Crowson (1963), Downie & Arnett (1996), Hayashi (1972), Lawrence (1977, 1991), Lawrence & Newton (1995), LeSage (1990), Li-zhong (2002), Majka & Pollock (2006), Miyatake (1960), Nakane (1963), Nikitsky (1989, 1998, 2005), Sato & Lee (2004), Savard (1985), Shockley & Cline (2004), White (1983), Young & Pollock (2002).

Summary of available genus-group names

Penthe Newman, 1838: 373 [*nomen protectum*]. Type species: *Helops obliquatus* Fabricius, 1798 by subsequent designation (Hope, 1840: 133).

Anorops Dejean, 1834: 210 [*nomen oblitum*]. Type species *Helops obliquatus* Fabricius, 1798 by monotypy.

Pyrrocis Laporte, 1840: 236. Type species *Helops obliquatus* Fabricius, 1798 by subsequent designation (Nikitsky, 2008).

Pyrrhocis Agassiz, 1846: 319 [unjustified emendation of *Pyrrocis* Laporte].

Acknowledgments

We thank Y. Bousquet (Agriculture and Agri-Food Canada, Ottawa) and anonymous reviewers for their comments on this manuscript.

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